# EVALUATION OF PROGRAM I
# CANADA-YUKON SUBSIDIARY AGREEMENT ON
# RENEWABLE RESOURCE DEVELOPMENT

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## RENEWABLE RESOURCE DEVELOPMENT

Prepared For: Department of Renewable Resources
Government of Yukon

Prepared By: M.C. McKay
Development Consultant

March 1983

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# INTRODUCTION

The Canada-Yukon Territory Subsidiary Agreement On Renewable Resource Development signed on April 4, 1979. The purpose of this agreement was to enable Canada and Yukon to jointly undertake the implementation of programs aimed at expansion of the renewable resource information base and the development of recreation and tourism facilities in Yukon. The objective of the agreement was to insure that development of Yukon resources proceed in an orderly fashion and that residents of the territory are provided with an opportunity to participate and take advantage of economic and employment opportunities associated with the development of these resources.

The agreement included four interrelated programs, namely:

1) Renewable Resource Information and Analysis
2) Tourism and Recreation Facilities
3) Resource Development Corps
4) Monitoring and Evaluation

Program I

The purpose of this program was to enable DIAND and the Yukon territorial government to jointly undertake the implementation of a well-planned program aimed at expanding the resource information base in the Yukon Territory. The objective was to collect and make available basic information on Yukon's renewable resources at appropriate scales and levels of detail for improving decision-making capability in social and economic development and in the management of resources.

The program was to facilitate for the planning and implementation of projects relating to renewable resource information analysis with priority given to those areas experiencing land use and development pressures. Reliable resource information was required by both the Federal and Territorial governments to fulfill their respective roles in socio-economic and resource development; land use planning, management and regulation; and environmental management and conservation.

The resource inventory program was to be co-ordinated jointly by the department of Renewable Resources, Government of Yukon, and the Department of Indian Affairs and Northern Development. Administrators, managers, planners, resource and inventory specialists were to be involved at all stages of the planning and implementation phases. The objective was to develop the skills of persons with respect to carrying out renewable resource inventories, conducting analyses and preparing assessments of resources to enable Yukon to become relatively self sufficient regarding such expertise.

It was recognized that the gathering of a comprehensive body of resource information would require the development of a storage and retrieval system for the manipulation, interpretation and updating of data and as a part of the program, a study was proposed to select a system compatable with the requirements of resource data users.

There was recognition within the agreement that time and funds would not be adequate for purposes of carrying out inventories in the entire Yukon. Priority areas were to be identified and the Renewable Resources

Information and Analysis Program would be directed to such areas.

The agreement was originally intended to terminate in March 31, 1982 but this was amended to March 31, 1983 without the addition of any new funds. The total amount of funds available for Program I projects was $2.4 million based on $1.4 million being provided by the Department of Indian and Northern Affairs, $0.6 million provided by the Department of Regional Economic Expansion and $0.4 million being provided by the Government of Yukon.

## EVALUATION

Section 9.1 of the Canada-Yukon Territory Subsidiary Agreement On Renewable Resource Development states the "Canada and the Territory shall also jointly effect an evaluation of this Agreement with respect to the general economic and socio-economic development of the Territory."

### PROGRAM I EVALUATION

#### Terms of Reference

I. An evaluation of Program I projects will include:

a) An assessment of the suitability of data collected by the various inventories, scale of mapping, the types of interpretive maps, and the adequacy of reports and maps for Yukon resource management and regional planning.

b) An evaluation of inventory information, in particular the Ecological Land Survey, to determine its flexibility for use in various levels of resource management and planning.

c) An evaluation of the planning documents to determine the extent they meet Yukon planning requirements.

II. Comments on the suitability of the Lands Directorate, Canadian Land Data System and the B.C. Aquatic Resource Information Computer System for handling the type of Yukon resource inventory information generated from Program I projects.

## Methodology

The following methodology was utilized with respect to carrying out the evaluation of Program I as per the terms of reference.

1) program document assembly, review and assessment

2) meetings and consultation with program staff for purposes of assessing issues relative to inventory classification systems, field work, staff availability, training, information gathering and presentation.

3) meetings and consultation with various information users within governments and the private sector for purposes of obtaining their assessments of the information gathered by Program I for their particular functions.

4) meetings and consultations with those persons involved with the management of the Subsidiary Agreement On Renewable Resource Development for purposes of obtaining their assessment of Program I.

5) Consultation with those persons involved with data handling systems for purposes of assessing their applicability to Yukon needs.

6) consultation with the Deputy Minister, Department of Renewable Resources, Government of

Yukon and the Director General, Department of Indian and Northern Affairs, Government of Canada, with respect to the merits of Program I projects in meeting departmental goals and objectives and future arrangements relative to the need for continuing renewable resource inventories and planning activities.

7) the application of my personal knowledge and experience gained over several years of work relating to resource inventory and planning activities.

## PROGRAM DOCUMENTS

### Ecological Land Survey

The following reports and maps have or will be the products generated:

1) Resource Inventory Southern Lakes

   Department of Renewable Resources, Government of Yukon, 1983

2) Resource Inventory MacMillan Pass

   Department of Renewable Resources, Government of Yukon, 1983

3) Folio of Maps - Soils and Surficial Geology - Southern Lakes Area

4) Folio of Maps - Soils and Surficial Geology - MacMillan Pass Area

5) Folio of Maps - Vegetation - Southern Lakes Area

6) Folio of Maps - Vegetation - MacMillan Pass Area

7) Folio of Maps - Aquatics - Southern Lakes Area

8) Folio of Maps - Aquatics - MacMillan Pass Area

9) Perma Frost Distribution Map - Southern Lakes

10) Soil Capability for Agriculture Map - Southern Lakes

11) Campground Suitability Map - Southern Lakes

12) Sources of Aggregate Materials Map - Southern Lakes

13) Fish Distribution Map - Southern Lakes

14) Aquatics Recreation Capability Map - Southern Lakes

15) Eco District Map - Southern Lakes

Special Reports

The following Special Reports and Maps have or will be generated:

1) Geological and Hydrogeological Interpretations of East Kluane Project Area

Terrain Analysis and Mapping Services Ltd., 1980

2) Geological and Hydrogeological Interpretations of Haines Junction, Destruction Bay, Burwash Landing and Champagne

Terrain Analysis and Mapping Services Ltd., 1980

3) Ecological Land Classification and Evaluation of the Kusawa Lake Area Yukon Territory - East Kluane Planning Project

P.J. Senyk, E.T. Oswald, B. Brown, K. King

4) Vegetation of East Kluane Planning Area

E.T. Oswald, B.N. Brown, R.K. King

5) Guidelines for Scenic Resource Protection Southern Lakes Region Yukon

James Douglas, 1981

6) Archaeological Survey in the Southern Lakes District, Yukon Territory

Sheila C. Greer, 1980

7) An Introduction to the Archaeology of the MacMillan Pass - North Canol Road Area Yukon Territory

Sheila C. Greer

8) Preliminary Fisheries Report for North Canol Road

D.J. Davies and C.D. Shepard

9) Survey of Lakes in the MacMillan Pass Area

C.D. Shepard and D.J. Davies

10) Vegetation Types Within the Dempster Highway Corridor

D. Russell and A. Martell

11) A Summary of Dall's Sheep in the Ogilvy Mountains with Recommendations for Dempster Highway Corridor Management

D.L. Stewart, 1980

12) Dempster Highway/North Fork River Forestry Capability Cruise 1980 Forest Management Section, DIAND, Whitehorse

13) Geologic Interpretations and Evaluations of the Dempster Highway Area, 1981

Terrain Analysis and Mapping Services Ltd.

14) Classified Archaeological Significant Areas Southern Lakes District Yukon Territory, 1983

Sheila C. Greer

15) Eco District Mapping Southeast Yukon, 1983

Lands Directorate Department of Environment

16) Vegetation Mapping Carmacks/Ross River Area, 1983

E.T. Oswald

17) Detailed Vegetation Mapping for Communities of Faro and Ross River

E.T. Oswald, 1983

18) Identification of Critical Winter Habitat Areas for Dall's Sheep in Southern Lakes Area, 1983

Department of Renewable Resources, Government of Yukon

19) Color Infra Red Photography, 1981 Carmacks/ Ross River Area

Department of Renewable Resources, Government of Yukon

Planning Documents

1) East Kluane Concept Plan, 1982

Reid Crowthers and Partners

2) Dempster Highway Corridor Management Plan, 1983

M. Crombie

## DATA SYSTEMS REPORTS

The following reports have been generated relative to resource data information systems:

1) Yukon Resources Information System Study Project Report, March, 1982

2) Appraisal of Requirements for Resource Data for Planning and Development in the Yukon Territory, 1981

   Tomlinson Associates Consulting Geographers

3) Directory of Data Types and Sources in the Yukon

   Volume I and II, September, 1981

4) Report on Existing Systems, Yukon Resource Information System Study, 1981

   Tomlinson Associates Consulting Geographers

5) Yukon Resource Information Study, Appendix A

   Appraisal of Requirements for Resource Data for Planning and Development in the Yukon Territory

   Tomlinson Associates Consulting Geographers, 1982

## FINANCIAL SUMMARY

The following table displays estimated Program I expenditures

PROGRAM I EXPENDITURES 1979 - 1983 (estimated)

| Activity | Total Cost | DIAND Share | DREE Share | YUKON Share |
|---|---|---|---|---|
| Ecological Land Surveys | 1,406.3 | 895.8 | 296.7 | 213.8 |
| Special Reports | 461.1 | 175.2 | 166.4 | 119.5 |
| Data Systems Reports | 120.4 | 120.4 | - | - |
| Totals | 1,987.8 | 1,191.4 | 462.1 | 333.3 |

Note (1) Expenditures figures are approximate only - audits are presently nearing completion on 1981-82 expenditures and 1982-83 accounts are still in processing.

Note (2) Funding in the amount of $2.4 million was allocated within the agreement to support Program I activities.

DIAND $1,400.0
DREE $ 600.0
YUKON $ 400.0

## ECOLOGICAL LAND SURVEY

The ecological land survey is an integrated approach to the collection and application of environmental data. It incorporates the concept of land, in the holistic sense, as having reasonably stable attributes upon which a classification can be built to describe the ecosystems which comprise the landscape. Units of land are delineated and hence classified on the basis of ecological relationships. The homogeneity and functional integrity within the unit sets it apart from surrounding units. The quality of an E.L.S. is determined by the ability of practitioners to perceive the significant differences between units in terms of function and process as expressed by chosen indicators. Experienced practitioners with a good understanding of landscape and natural processes are the key to the successful undertaking of an E.L.S.

An E.L.S. is hierarchial in nature:

1) Ecoregion - an area of the earth's surface characterized by distinctive ecological responses to climate as expressed by vegetation, soils, water, fauna, etc.

2) Ecodistrict - a part of an ecoregion characterized by a distinctive pattern of relief, geology, geomorphology, vegetation, soils, water and fauna.

3) Ecosection - a part of an ecodistrict throughout which there is a recurring pattern of landforms, soils, vegetation, water bodies and fauna.

4) Ecosite - a part of an ecosection having relatively uniform parent material, soils, hydrology, and a chronosequence of vegetation.

The decision was made to conduct an ELS in Yukon at the Ecosection level at a scale of 1:100,000. This decision was based upon numerous meetings and discussions culminating in a workshop held in Whitehorse, Yukon in the fall of 1979 which involved knowledgeable practitioners familiar with ELS and various users of information. The application of an ELS at the Ecosection level to priority areas in Yukon where little information existed, was deemed adequate to provide a level of detail which would assist regarding regional

land use planning, regional parks planning, forestry management, corridor planning, environmental impact statements and delineation of habitat related to wildlife.

The ELS was applied to two priority areas in Yukon - Southern Lakes Area and the MacMillan Pass Area. The total area surveyed was approximately 27,500 square kilometres or approximately 11,000 square miles representing about 5 percent of Yukon's land area. The information generated by the ELS is contained in reports and maps prepared on a scale of 1:100,000.

Observations and Comments

1) Many of the ELS products are not yet in completed form but sufficient progress has been made toward the completion of the various reports and maps to enable an evaluation to be made.

2) From a technical and cartographic perspective, the reports and maps are of a standard and quality comparable to production prepared in other jurisdictions.

3) The information contained within the ELS reports and maps will be a valuable assist to persons involved in regional land use planning, corridor planning, forest management planning, fisheries evaluations, environmental impact statements, the delineation of wildlife habitats, highway planning etc. The information provided by the ELS will enable regional planners from a variety of disciplines to identify areas that are suitable for their particular needs and/or establish, with some level of confidence, the problems that may be encountered given particular endeavors in various areas.

4) Discussions with numerous potential users of ELS information in Yukon has revealed that their needs for information are more site specific and at a greater level of detail than that generated by the ELS. This situ-

ation is not surprising in that few agencies of the territorial and federal governments employ staff to address the longer range perspective of resource planning, allocation and management. There is some evidence to indicate that governments in Yukon recognize the need for macro planning efforts and supporting data such as ELS in dealing with issues such as land use planning and land use plans; developments on the Yukon north slopes and MacMillan - Howard's Pass; conservation strategies; placer mining operations; wildlife management strategies; parks and numerous others. The deployment of people to address the macro planning and policy issues respecting resources allocation and use will generate a demand for ELS information and these efforts will aid in the more efficient and effective allocation of funds and staff relative to efforts required in support of site specific actions.

5) The ELS, although somewhat new in its application to the gathering and recording of resource information, is the product of

several years of testing by the scientific community in Canada which has addressed this issue and supports its application particularily for the northern regions of Canada. The Yukon ELS in my judgement will prove to be a valuable undertaking and this approach should be continued into the future with respect to the gathering and recording of resource related information in Yukon.

6) It is predictable that the ELS approach will experience opposition and competition from those who support more site specific discipline types of information gathering procedures. Both types of information are required but one procedure should not be sacrificed to serve the others needs. A balance is required regarding the allocation of funding and staff to support the total needs of resource related information assembly and use.

7) The decision to establish a technical advisory committee to assist with the various technical dimensions of gathering and report-

ing relevant information in support of the ELS and discipline requirements was a prudent decision and a similar committee should be retained in support of continuing resource inventory work.

8) The interpretive maps that can be generated from the ELS data base will be of value to numerous users in that this information is relative to immediate needs such as defining areas suitable for agriculture use, campgrounds, recreation, aggregate supply, etc.

## SPECIAL REPORTS

Program I funding was provided to undertake a number of special reports which were required in support of particular information needs in the designated priority areas of Southern Lakes and MacMillan Pass as well as the Dempster Highway corridor, East Kluane planning area, Carmacks-Ross River area and the Cantung area.

The reports and maps prepared for the East Kluane planning area related to geological, hydrogeological, vegetation and land classification information required relative to highway design, public works projects in various communities, pipeline routing, parks planning, land claims and campground development.

The reports and maps prepared for the Dempster Highway corridor related to geological, hydrogeological, vegetation, forestry and wildlife information required to support the preparation of management plan for the corridor involving highway realignments and upgrading, campground improvements, wildlife management and safety analysis.

Archaeological studies were carried out in the Southern Lakes and MacMillan Pass areas for purposes of providing historical and pre-historical information relative to human use of these areas. Potential highway relocation and new highway routes, hydroelectric developments, townsites, pipelines, mining developments and other development activities require information respecting the archaeological significance of areas in the preparation of environmental impact statements.

Fisheries information relative to streams crossed by the north Canol road and lakes in the MacMillan Pass area was gathered and reported on as this information was deemed necessary by those planning the upgrading of the north Canol road and the possible construction of new roads. The potential of a new town site was being examined as well as the developments at mine sites and fisheries information was required for assessment purposes relative to impacts these developments might have upon the fish resource.

The vegetation typing and mapping undertaken in the Carmacks-Ross River area provides information which assists forestry and wildlife managers in the preparation of resource management plans for the area. The

information is also useful with respect to assisting in the delineation of areas requiring more detailed examination regarding forestry, parks planning and development activities that may occur in the area.

The Ecodistrict mapping undertaken in the Southeast Yukon area provides a macro level of information in an area of Yukon where little information presently exists. This data base will be useful for macro planning and for purposes of delineating those area where more detailed information should be gathered as and when required for various purposes.

Observations and Comments

1) The Special Reports have served to provide information needed by those persons involved with the more immediate development and or planning activities of governments. The reports and maps are of good quality and the information is provided at a level required to assist planners and managers to formulate action plans.

2) The Special Reports are discipline oriented and as such provide that dimension only of the total spectrum of information required as compared to ELS information which covers a broader range of resource information.

3) The undertaking of Special Reports within the framework of Program I activities has been a prudent decision in that a balance has been maintained between the provision of information to serve immediate needs and that required for more long term planning and development activities.

4) The capacity to provide for the undertaking of Special Reports should be embraced within future programming related to the gathering and reporting of resource information.

## PLANNING DOCUMENTS

There have been two planning documents prepared as a result of Program I funding. The East Kluane Planning document is a reasonably good one in that it follows the accepted methodology in arriving at a conceptual land use plan for the area. The document provides the necessary assembly of information upon which a proposed plan has been formulated and this can serve to provide a starting point for review and discussion with those persons who have a vested interest with regard to the finalization of a land use plan for the East Kluane area.

The Dempster Highway Management Plan document in its present draft form provides a good resume of information known about the area and the rationale for the recommendations provided respecting the proposed management plan. The document requires the inclusion of an "executive summary" which sets out the goals, objectives and actions required to implement the management regime proposed. The summary and map displaying the management areas should be brief and concise. The balance of the report serves as an appendix to the

summary and can be read by those requiring detailed information. The completed report will provide a sound basis upon which these responsible for making decisions relative to adopting a management plan for the Dempster Highway corridor can proceed.

## DATA SYSTEMS

The data generated by the Ecological Land Surveys has been or is in the process of being stored in the Canadian Land Data System which is maintained by the Lands Directorate, Department of Environment, Government of Canada, Ottawa. This data system is perhaps one of the most capable systems that exists in Canada respecting the ability to store and retrieve statistical and map information. It is a spatial data handling system which allows maps to be digitized into a computer, stored and analyzed using the computer, and results produced as either lists of statistics or new maps or both. The utilizing of the Canadian Land Data System for the storing of the Yukon ELS data has been a prudent one particularly from the aspect that the data has in fact been stored and is retrievable to produce various data sets and maps as may and will be required by numerous users. Had the data generated by the ELS been only recorded on maps and reports of a limited number, then the potential use of the data would have been severely restricted.

The ELS efforts to date have concentrated on the storage aspect of data handling and little has been done with respect to data retrieval in formats to serve a variety of user needs. Given the time frame and funding relative to Program I and the ELS dimension, the procedures relative data handling have proceeded about as far as it was possible. The challenge that remains is to develop in the future years the capacity to analyze and retrieve the ELS data in formats that will be available in Yukon for use by planning and management staff of governments and the private sector.

The choice and utilization of the B.C. Aquatic Resource Information Computer System for the handling of the aquatic data generated by the ELS and Special Reports relative to fisheries was a good choice. This particular information system has been developed to serve the aquatics data handling needs of British Columbia and has proven to be adequate. Yukon Aquatics data has been stored in the B.C. system and is retrievable in various formats relative to user needs. A similar situation exists with respect to data retrieval as that regarding the data stored in the Canadian Land Data System.

The Yukon Resources Information System Study prepared by Tomlinson Associates Consulting Geographers 1982 states "there is not sufficient data handling associated with current planning and development activities to warrant the purchase of an off-the-shelf system and its installation in the Yukon at the moment. Interim requirements to handle mapped data on computers, prior to the implementation of a Yukon-wide computer-based spatial data system, can be accommodated on external systems". The Canadian Land Data System and the B.C. Aquatics Information System are both external systems that have demonstrated capabilities and as such are good choices for the interim data handling needs of Yukon.

The Tomlinson report recommends the establishment of a "Yukon Resources Data Unit" and outlines the operations of such a unit. This recommendation should be pursued within the context of future agreements between the governments of Yukon and Canada regarding natural resource inventories and land use planning. The use of external data systems for the handling of spatial data will likely continue for sometime into the future. Skills have been developed in Yukon with regard to the imputing of data for the external systems but skills

remain to be developed in Yukon respecting the output of data. Assuming the establishment of a "Yukon Resources Data Unit" one of the immediate tasks which should be undertaken by this unit is to develop skills and the appropriate linkages with the external data systems to permit for the stored data to be prepared in formats to facilitate the needs of Yukon resource information users.

## STAFFING

One of the objectives of the Subsidiary Agreement on Renewable Resource Development was to train and develop a staff capability in Yukon for purposes of conducting Ecological Land Surveys and other resource inventories.

It was recognized that obtaining the services of people having experiences with respect to conducting Ecological Land Surveys would be difficult if not impossible due to the fact that the survey technology is relatively new and few people have had the opportunity to gain experience.

The department of Renewable Resources, Government of Yukon, found that it was impossible to attract persons having experience in ecological land surveys and a decision was made to engage the services of persons having qualified discipline skills and to facilitate for their training with regard to ecological land surveys. A technical committee comprised of persons from various departments and agencies of government who had experience relative to conducting ecological land surveys and

discipline surveys was formed to provide guidance and training to project staff. The technical committee members and the project coordinator contributed greatly with respect to enabling the project staff to develop the skills necessary to undertake ecological land surveys and other associated classifications in Yukon. The technical committee continued to serve in a monitoring/advisory capacity and as such assisted with the gathering and recording of ecological land survey data in a manner which met accepted professional standards.

The department of Renewable Resources did experience problems regarding the retention of staff engaged to carry out the ecological land surveys. Staff resignations occurred at the technical and professional levels and this caused some problems regarding the continuity of project activities. Replacement staff were secured and trained and production targets adjusted accordingly.

The staffing situation experienced by Program I activities was similar to that experienced by other departments of the federal and territorial governments. There continues to be a situation where obtaining and retaining the services of persons in a particular role

for periods beyond two years or less in the North is a factor with which employers must contend. There does not appear to be any single factor which contributes to this particular phenomenon but rather it would appear as through there are several factors which contribute to staff mobility. It is not the intention of this evaluation to dwell on the factors associated with staff mobility but rather to point out the fact to project managers that they must be prepared to cope with this situation and to plan for such eventualities with regards to achieving production targets within designated time periods.

Some Program I activities will not be completed by March 31, 1983 as planned. Contingency plans should be mounted to enable the completion of this work to capitalize on the efforts undertaken to date. Staff turnovers, training and time required to complete various tasks as gained by experience have all contributed to production delays relative to planned target dates for completion. Given the complex nature of implementing an ecological land survey in Yukon, the efforts of the project coordinator who has remained with the project over its four-year life span should not be underscored. The dedication and untiring efforts of the

Program I coordinator and his staff have significantly contributed to the collecting and availability of basic information on Yukon's renewable resources. It is unfortunate that a new agreement and associated funding has not been entered into by the Government of Canada and Yukon to enable the continuation of a valuable undertaking and the utilization of persons trained in the field of renewable resource inventories.

## MANAGEMENT AND ADMINISTRATION

A review of the agreement Management Committee and Program I Sub Committee minutes, discussions with committee members, Program I coordinators, project staff, financial staff and program auditors indicates the following:

1) that a sincere and dedicated effort was rendered by the Management Committee, Sub Committee and program coordinators with respect to defining and describing a series of projects which met the agreement and program objectives given the constraints respecting time and funds as set out by the agreement.

2) that the Management Committee and Sub Committee members and the program coordinators, individually and collectively did provide the necessary technical supervision required to achieve expected results as established by project authorization documents.

3) that the management and administration of cost shared agreements such as the Subsidiary Agreement On Renewable Resource Development demands that governments and their respective involved departments must adopt new or special procedures with respect to program management and administration as compared to normal departmental management and administration. The relative inexperience of persons charged with the administration and management of the Subsidiary Agreement On Renewable Resources Development did contribute to some honest confusion regarding the departmental roles, relationships, responsibility, accountability, implementation and financial dimensions of the agreement programming.

4) that despite some continuing problems respecting the implementation and funding of Program I projects, the Management Committee, Sub Committee, program coordinators and project staff have demonstrated a capability to deliver products that will assist with the complex task of planning, managing, devel-

oping and allocating renewable resources in the Yukon Territory.

5) that the persons associated with Management Committee, Sub Committee, program coordination and implementation have gained valuable experience and knowledge with respect to the various dimensions of cost share agreement administration, management and implementation. The undertaking of future agreement programming will be improved as a result of the experience gained with respect to management and administration of Program I projects as per the Subsidiary Agreement On the Development of Renewable Resources.

Observations

The following comments are prepared in the context of providing some guidelines to those persons who will be involved with the preparation, management and implementation of programming as defined in future subsidiary agreements.

1) that those persons charged with the responsibility of developing programming to be undertaken by agreements should, as soon as possible, identify and specify the implementation responsibility of the government/department relative to the agreed upon programming. This procedure will then permit the participation of the implementation persons in the process of preparing the necessary administrative procedures to facilitate for program delivery. In many instances, the agreement negotiators and program implementors are not one and the same, and, therefore, a gap exists with respect to the "planning and doing" phases of agreement programming. The agreement negotiators must respect program implementors and draw on their skills with respect to program design and the converse is true, the implementors must respect the role of negotiators. The establishment of this procedure as early as possible within the framework of agreement negotiations will result in a "willing" and "understood" implementation of programming by designated departments of governments.

2) Agreement management and administration, as related to agreements entered into by governments, bears many similarities to departmental management procedures but there are some very distinct differences which sometimes are not recognized by departmental line managers who most often are also assigned the task of managing agreements. An agreement is not a government department as such and therefore can not be managed in the same way. Agreement management and administration focuses heavily on program, project, activity design; the establishment of specified targets; the allocation of funding and accounting of the funding; monitoring, progress reporting and evaluation. The implementation procedures with respect to carrying out programming, projects and activities are the responsibility of a designated department and that agency must perform in accordance to the rules associated with its responsibility and accountability. The implementation agency is not responsible or accountable to agreement management with respect to "how" it carries out its activities but it is responsible and accountable to agreement

management with respect to "what" it has produced. Agreement managers and program/ project implementation managers must develop a mutual trust and respect for each others needs and proceed in a cooperative manner to achieve the desired results for which both can take credit.

3) that an Agreement Secretariat be defined within the context of future subsidiary agreements and appropriate funding be allocated to provide for this function as a necessary assist to those matters pertaining to the management and administration of subsidiary agreements. The Secretariat would provide support functions to the Agreement Management Committee relative to:

a) recording of minutes of meetings and maintaining an agreement filing system
b) preparing project authorization documentation
c) developing financial systems, budgets, reports and audits
d) carrying out project monitoring
e) carrying out project evaluation

f) effecting project progress reporting

g) establishing project signage

h) preparing press releases and information dissemination

i) preparing agreement and project amendments

j) carrying out other duties as deemed required

The Secretariat should be comprised of a core staff of at least three persons, namely: a projects officer, a financial officer and a stenographer. Others may be required from time to time and could be provided for by contractual arrangements.

4) The failure to establish an Agreement Secretariat at the initial stages of implementing programming as per the Subsidiary Agreement On Renewable Resource Development could be cited as the major reason for problems associated with the administration of agreement programming and funding. The administrative problems associated with Program I were minimized primarily due to "above and beyond the call of duty" effort by a few individuals associated with the

program, particularly the program coordinator. But this was not the case in at least one other program contained within the Agreement.

5) Management Committee should give serious thought to amending the necessary project authorization documents to permit for uncompleted Program I activities to be continued in the 1983/84 fiscal year. There would appear to be sufficient funds remaining in Programs I, II, III and IV to enable the completion of existing Program I activities in the 1983/84 fiscal year. If a new agreement is entered into in 1983 which supports activities similar to those already in existence under Program I of the current agreement, the current agreement would then be terminated and the new agreement would be implemented. This type of agreement management would permit for the retention of trained personnel and the smooth transition and continuance of renewable resource related inventories which are needed in Yukon by both the governments of Canada and Yukon.

6) The inclusion of a program relating to renewable resource inventories at a scale of 1:100,000 and 1:20,000; the establishment of a central renewable resource information repository and the further development of machine assisted technology regarding the storage, retrieval and manipulation of resource data should be given serious consideration by those involved with the planning and implementation of new agreements respecting renewable resource development.

## EVALUATION SUMMARY

The following comments are set out relative to the various activity areas supported by funding provided via Program I Canada-Yukon Agreement On Renewable Resource Development 1979-1983.

### Ecological Land Surveys

1) The undertaking of Ecological Land Surveys in priority areas in Yukon were of an applied research nature. The ELS has been developed over several years of research and the application of this research relative to conducting ecological land surveys at the Eco Section level at a mapping scale of 1:100,000 was one of the first major undertakings of this type of survey in Canada. The conducting of ELS in Yukon was not without problems respecting the application of research technology at the field level but this was to be expected. The dedication of experienced practitioners and the skills learned and applied by developing practitioners combined to

result in an acceptable product as viewed from a scientific, technical and cartographic perspective.

2) The field mapping scale of 1:100,000 is adequate to meet the needs of those persons involved with regional planning and management issues. This scale as a basis for data collection proved to be satisfactory to enable practitioners to survey relatively large areas of land and to record significant information.

3) The major products generated by ELS are reports and folios of maps pertaining to soils, geological, vegetation and aquatics information - base line information. Given this information, numerous interpretive maps can be prepared to meet particular information user needs, such as sources of supply of aggregate materials, permafrost areas, suitability for agriculture, forest management and others. This type of information will assist persons involved with planning and resources management activities at a regional level.

4) The ELS should be continued in Yukon and supported by the governments of Canada and Yukon as this effort will entrance the information base upon which decisions are made relative to managing and developing the resources of Yukon.

5) The objective of developing skills in Yukon with respect to conducting ecological land surveys has been reasonably well achieved. The core of trained professional and technical persons presently available in Yukon should be retained to further the collection, storage and retrieval of much needed information regarding resources.

SPECIAL REPORTS

1) The capacity to continue to conduct special surveys in areas of immediate concern should be retained in any future programming related to resource inventory work. The information required is of a gap-filling nature and is useful in terms of decisions. The scale of mapping of such information will vary with particular needs and this should be accommodated.

2) The Special Reports prepared with Program I funding have been useful and are of an acceptable quality.

3) If programming within future subsidiary agreements is being contemplated, consideration should be given to a balance of funding to permit for ELS and Special Surveys to be carried out within that program framework. Consulting services can often be utilized for these types of specific discipline surveys.

PLANNING DOCUMENTS

1) The two planning documents supported by Program I funding were prepared without the benefit of ELS data and therefore cannot be considered as a testing of the use of ELS data in support of regional planning.

2) If a regional planning project were to be undertaken in either the Southern Lakes area or the MacMillan Pass area then a valid test would be assured regarding the applicability of the ELS data for regional planning purposes.

3) The East Kluane Planning Area completed document is an acceptable product.

4) The Dempster Highway Corridor Planning document is presently in draft stage and requires further work to make it an acceptable document for use by those persons who will be involved in decisions relative to adopting and implementing the plans proposed.

## DATA SYSTEMS

1) The decision to utilize external data systems namely the Canadian Land Data System and the B.C. Aquatic Resource Information Computer System for purposes of storing information gathered by ELS was a valid one and was confirmed by a consultant's report respecting data handling needs for Yukon.

2) The reports prepared by Tomlinson Associates Consulting Geographers in regard to Yukon Resource Information Systems establishes the resource information requirements for Yukon and a course of action to address the situation. The establishment of a

"Yukon Resources Data Unit" was recommended for purposes of addressing the challenging area of resource information storage and retrieval in Yukon.

3) If future agreements are to be negotiated between the governments of Canada and Yukon regarding renewable resource development, serious consideration should be given to the inclusion of funding to permit for the establishment and operation of a Yukon Resources Data Unit. The creation of such a unit would be extremely beneficial to both governments with respect to standardizing the gathering, storage and retrieval of resource information required for administration, planning and management purposes.

## AGREEMENT MANAGEMENT AND ADMINISTRATION

1) Experience is a great teacher. The experience gained with respect to the management and administration of the Canada-Yukon Sub Agreement On Renewable Resource Development should result in the adoption of different procedures relative to the

management and administration of future agreements in Yukon.

2) The establishment of an Agreement Secretariat should be considered regarding the management and administration of future Canada-Yukon subsidiary agreements.

3) Although some honest confusion did exist relative to the management and administration of Program I activities, the collective efforts of all involved should be recognized in that they have enabled a difficult and challenging program to be undertaken in Yukon which will serve as a bench mark for future action regarding the collection, recording and dissemination of information about the renewable resources in Yukon for use by those involved in the planning, administration and management of renewable resources.